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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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09/685,205

10/10/2000

John W. McCorkle

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01/19/2005

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EXAMINER

LIU, SHUWANG

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/685,205

Applicant(s)

MCCORKLE ET AL.

Examiner

Shuwang Liu

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22 is/are rejected.
- 7) ☒ Claim(s) 1-21 and 23-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with terminal disclaimer and affidavits, filed 09/23/04, with respect to the rejection(s) of claim(s) 1-8 and 22-24 under USC 35 102(e) and double patent rejections have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Miyamoto et al. (US 6,559,996) as following.

Claim Objections

2. Claims 1-21 are objected to because of the following informalities:

(1) In claim 1, line 2, "a differential mixer" should be changed to - -a first differential mixer- - and "a pulse generator" and "a pulse sequence" as recited on line 5 should be changed to - -a first pulse generator- - and - -a first pulse sequence- -, respectively, in correspondence with "second" as recited in claims 17-19;

(2) In claim 17, line 3, insert - -of said second differential mixer - - after " second input";

(3) In claim 17, lines 11, insert - -generated by said second pulse generator- - after "two pulses";

(4) In claim 17, line 13, insert - -second- - before " differential mixer";

(5) In claim 18, line 2, insert - -of said look-up table- - after "the input". Similar changes should be applied to lines 4, 5, 7 and 8 and claims 20 in order to avoid indefiniteness for these limitations in the claims; and

(5) In claim 19, "the pulse sequence" in line 7, the pulse generator" in line 9 and "the differential mixer" in line 10 should be changed to - - the first pulse sequence- -, - - the first pulse generator- -, and - -the first differential mixer- -, respectively. Similar changes should be applied to other claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by Miyamoto et al. (US 6,559,996).

As shown in figures 1, 3, 10, 12, 14, 15, 20, 23, 30 and 31, Miyamoto et al. discloses a method for generating shaped ultra wideband wavelets, comprising the steps
of:

encoding (72) data from a data source (71) as a non-return-to-zero sequence (NRZ) of pulses,

generating (5) a pulse sequence having at least two pulses (see F in figure 14), and having a predetermined pattern; and

mixing (4) the non-return-to-zero sequence of pulses with the pulse sequence to produce a sequence of shaped ultra wideband wavelets, each wavelet having a predetermined shape having the data encoded therein (column 7, line 4-column 8, line 65, column 2, line 57-column 3, line 40 and column 15, lines 13-35).

Allowable Subject Matter

5. Claims 1-21 would be allowable if rewritten to overcome the objections, set forth in this Office action.

6. Claims 23-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach a method for generating shaped ultra wideband wavelet, comprising mixing the NRZ sequence of pulse with the pulse sequence, wherein at least one of the at least two pulses is input to a first differential input of a mixer, and another one of the sat least two pulses is input to a second differential input of the mixer.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu
Primary Examiner
Art Unit 2634

January 13, 2005